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ABSTRACT

U.S. junior high school students in grades 7 and 8 (N=226) responded to survey items on their self-esteem and interest in schoolwork, their personal expectancy of completing high school, and perceived support from their teachers, parents, and peers for this expectancy. Their grade point average (GPA) and attendance data were obtained from school records. Structural equation models found that each of the four factors (Personal, Teacher, Parent, and Peer) had noteworthy positive impacts on self-esteem, interest in schoolwork, and GPA. The Personal and Teacher factors also had negative impacts on absence from school. However, when all four predictors and four outcome measures were considered in the same model, for all four outcomes, the strongest paths were from the Teacher factor, stronger than the paths from the Personal factor or from the significant others. These results show the importance of teacher support at the critical stage of early high school. Teacher educators should equip teachers in training and in service to provide students with favorable feedback on academic expectancy. An appendix lists study variables with their alpha reliability estimates. (Contains 2 tables and 37 references.) (Author/SLD)

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Students' Perceived Support From Teachers: Impacts on Academic Achievement, Interest in Schoolwork, Attendance, and Self-Esteem

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Paper presented at the International Conference on Teacher Education at the Hong Kong Institute of Education, Hong Kong, 22-24 February 1999.

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Practitioners and researchers interested in self-concept research may also visit the home page of the SELF (Self-concept Enhancement and Learning Facilitation) Centre at

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Abstract

American high school students in Grades 7 and 8 (N = 226) responded to survey items on their self-esteem and interest in schoolwork, their personal expectancy of completing high school, and perceived support from their teachers, parents and peers for this expectancy. Their GPA and attendance were obtained from school records. Structural equation models found that each of the four factors (Personal, Teacher, Parent, and Peer) had noteworthy positive impacts on self-esteem, interest in schoolwork and GPA. The Personal and Teacher factors also had negative impacts on absence from school. However, when all 4 predictors and 4 outcome measures were considered in the same model, for all 4 outcomes, the strongest paths were from the Teacher factor, stronger than the paths from the Personal factor or from the other significant others. These results show the importance of teacher support at the critical stage of early high school. Teacher educators should equip teachers in training and in service to provide students with favorable feedback on academic expectancy.

Shavelson, Hubner, and Stanton (1976) define self-concept as a person's perception of himself or herself that is formed through experiences with the environment and influenced especially by environmental reinforcements and significant others. This definition emphasizes the influence of significant others in the formation of self-concept and self-esteem. However, the literature on self-concept research seems to have suggested that among others, the teacher is likely to be the weakest agent of change in student self-concept (Hattie, 1992). In early childhood education, some researchers have also demonstrated that the teacher is likely to be a weak agent in enhancing academic achievement beyond family variables (Scarr & Thompson, 1994). The present study examines the impacts of adolescents' personal expectancy of academic achievement and support of this expectancy from parents, teachers and peers on their

academic performance, interest in academic work, and self-esteem in the school setting. The focus of the study is on the impacts of support from the significant others, and on who, among the significant others, contributes most to these important educational outcomes. This investigation is important particularly to teacher education. If peers tend to have the greatest influence, then teacher education programs should emphasize peer support. If parents tend to have the greatest influence, then potential teachers should learn how to involve parents in the school program.

Impacts of Significant Others

Support from significant others has been found to be important in children's and adolescents' development of values (e.g., Zern, 1985) and adjustments to new environments (e.g., Dunn, Putallaz, Sheppard, & Lindstrom, 1987; Mangione & Speth, 1998; Wolfendale, 1984). Harter and Pike (1984) have also proposed that students' self-concepts and self-esteem tend to be high if they perceive themselves as competent in certain areas that are also believed to be important (see review by Byrne, 1996). This sense of competence (often labeled as academic self-concept) is likely to be influenced by reinforcements received from significant others.

Recent research on academic self-concept has established a close relation between academic self-concept and academic achievement and behaviors. For example, self-concept may have motivational properties that can facilitate changes in academic achievement such that enhanced academic self-concept may result in better academic achievement and behavior which may in turn enhance academic self-concept (e.g., Byrne, 1984; Hay, 1997; Marsh & Yeung, 1997a, 1997b; Muijs, 1997; Yeung & Lee, in press; also see Yeung, Chui, & Lau, in press). Students' self-concept is therefore both an important educational outcome and an important factor that may facilitate other desirable outcomes (Marsh, 1993).

Whereas recent research has focused on self-concepts in specific curriculum domains (e.g., Marsh, 1986; Marsh & Shavelson, 1985; Marsh & Yeung, 1997a, 1997b), the construct of self-esteem has been more loosely defined. Self-esteem is usally taken as a context-free perception of the self and should be representative of an overall description and evaluation of the self. It is typically measured by a set of response items that do not refer to any specific context (e.g., Rosenberg, 1979). However, self-esteem as a context-free construct may not be as stable as has been assumed. In three studies, Marsh and Yeung (in press) demonstrated that measures of self-esteem tend to assume the nature of the other measures within which the self-esteem items are embedded. Thus, self-esteem items became more physical when embedded in a physical (sport) context but became more academic when embedded within an academic context. This "chameleon effect" of self-esteem (Marsh & Yeung, in press) suggests that self-esteem as a measured construct can hardly be really context free. In the present study where the focus is on the effects of psychological support from significant others on self-esteem, even though typical self-esteem response items were used (see Appendix), because we placed them in the context of the school setting, we refer to it as "academic self-esteem" hereafter. Because potential influences of significant others are more likely to affect individuals' in a more generic sense than in any specific curriculum domain, the present study focuses on students' academic self-esteem rather than domain-specific self-perceptions.

Personal and Environmental Impacts on Educational Outcomes

According to Shavelson et al. (1976; also see Coppersmith & Feldman, 1974), an individual's perceptions are likely to be influenced by environmental reinforcements and significant others; and beliefs of whether a subject area is important are often derived from the school environment and significant others, such as parents, teachers, and peers. Thus whether the beliefs and expectancies of a student are supported by significant others is likely to have an

important impact on the formation of student's self-esteem, academic behavior, and academic performance.

The emphasis of a congruence between a student's beliefs and perceptions of significant others is also consistent with person-environment fit theory (Ryan & Schmit, 1996; Ostroff & Rothausen, 1997; Pervin, 1968; also see review by Kristof, 1996) which is often used in explaining organizational behavior. According to this theory, an individual student's expectancy in educational achievement (the person) supported by the significant others (the environment) is likely to generate motivational forces that would facilitate desirable outcomes, such as enhanced academic performance, self-esteem, interest in schoolwork, and reduced attrition rate. From this viewpoint, it is reasonable to expect that both the personal and the environmental components (perceived support from significant others in this case) would have substantial impacts on these outcomes.

Relative Impacts of Significant Others

Even though we may expect the influence of significant others to be substantial, unclear is the relative strengths of these impacts on the adolescents' educational outcomes. Based on findings that children's academic and social competence can be mostly predicted by their family background (e.g., Scarr & Thompson, 1994), we may anticipate that parents' psychological support in children's educational expectancy would be the most influential among all other sources of support. From a developmental perspective, however, the time adolescents spend with peers is rivaled only perhaps by their parents (Hartup, 1983), and as children grow older, the time they spend with peers further increases and peer relations contribute dramatically to how adolescents think (Hartup & Sancilio, 1986; Rubin & Krasnor, 1985). It is not surprising that adolescents would share common interests and beliefs (Gottman, 1983), and peer support could therefore have increasingly powerful influences as the adolescents grow up. In contrast, some researchers have suggested that the teacher is unlikely to be more influential than other

facilitators of change (e.g., Hattie, 1992). In the school setting, however, the teacher is probably one of the most salient sources of feedback for an adolescent's academic proficiency. Thus it would be surprising if the teacher is not one of the most powerful sources of reinforcement in the formation of academic self-esteem and development of academic behavior.

Based on this review, we hypothesized that both personal expectancy and perceived support from significant others would have positive impacts on academic self-esteem, interest in schoolwork and academic performance, and negative impacts on absence from school. In testing this hypothesis, we applied a structural equation modeling approach which also allowed us to examine the relative effects of the significant others on the outcome measures. In essence, we attempted to provide an answer to the question of who, among the significant others considered here, tends to contribute most to the formation of academic self-esteem, development of interest in school work, and enhancement of academic achievement.

Method

For all the items considered in the present study (see Appendix), a 5-point Likert-type scale was used (1 = strongly disagree to 5 = strongly agree).

Personal and Environmental Factors

Personal expectancy. Personal educational expectancy was inferred from three items coded such that higher scores reflect favorable expectancies of completion of high school.

Parent support. Four items each inferred the perceived support from the student's father and mother. Higher scores reflect more favorable parental support. Because preliminary analysis found that the students did not differentiate between their father's and mother's expectancies and support, a single Parent factor was used in the structural models.

Teacher support. Perceived teacher support was inferred from four items. Higher scores reflected more favorable perceived support.

Peer support. Perceived support from peers was inferred from three items. Higher scores reflected more favorable perceived support.

Outcome Variables

Interest. Interest in schoolwork was inferred from four items. Higher scores reflected greater interest in schoolwork.

Esteem. Self-esteem in the school context was inferred from seven items. Higher scores reflected higher self-esteem at school.

Absence. The number of days absent in the school year was taken from the school records. Although there was a wide range of possible reasons for absence from school, this variable may be a reasonable outcome measure especially for high school students whose attrition rate is likely to be higher.

GPA. Standardized scores were obtained from school records. Higher scores reflected better performance in schoolwork.

Participants

The participants were 161 Grade 7 and 151 Grade 8 Anglo students from a high school located in Phoenix, Arizona of the U.S.A. (53% were girls). The survey was administered in intact classes by their teachers to students who had completed informed consent forms from themselves and their parents. Each item was read aloud in English while the students responded to it. The sample of students for the purpose of the present study after listwise deletion of missing data was 226.

Statistical Analysis

Confirmatory factor analysis (CFA). CFA was conducted with the SPSS versions of PRELIS and LISREL (Joreskog & Sorbom, 1989) based on listwise deletion for missing data. Procedures regarding the conduct of CFA is available elsewhere and are not further detailed here (e.g., Bollen, 1989; Byrne, 1998; Joreskog & Sorbom, 1993). Following Marsh, Balla, and

Hau (1996), and Marsh, Balla, and McDonald (1988), we emphasize the Tucker-Lewis index (TLI) to evaluate goodness of fit, but also present the χ^2 test statistic, and the relative noncentrality index (RNI). For an acceptable fit of a model to the data, typical guidelines are that the TLI and RNI should be greater than .9. CFA models in the present study posited eight a priori factors based on a 31 x 31 covariance matrix. Model A was a measurement model testing the validity of the constructs considered in the study. Subsequent structural models were based on the factor structure established in Model A. Models B first tested the effects of each of the Person factors on the four outcome measures. Finally, Model C tested the relative effects of all the Person factors on all four outcome variables.

Results

Model A: Measurement model. Alpha reliabilities estimated for the a priori scales are presented in Appendix. A summary of the models and their goodness of fit is presented in Table 1. Model A which tested the construct validity of the factors had the inclusion of correlated uniquenesses for items with similar wordings. The model provided a good fit to the data (TLI > .9). Subsequent models were based on the validity of Model A, were properly converged, and displayed acceptable model fit (all TLIs > .9).

Model B: Model B was a series of four models examining the effect of each individual Person factor on four outcomes. The results show that each of the Person factors had significantly positive effects on Interest, Academic self-esteem and GPA. Also, the Personal and Teacher factors had significantly negative effects on Absence from school. Thus Models B provided evidence of noteworthy effects of each of the Person factors on students' interest in schoolwork, academic self-esteem, and GPA scores. Also, of all the significant others considered here, Teacher also seemed to have a noteworthy effect on minimizing students' absence from school in Grades 7 and 8, which is a critical transition stage in the adolescents' education.

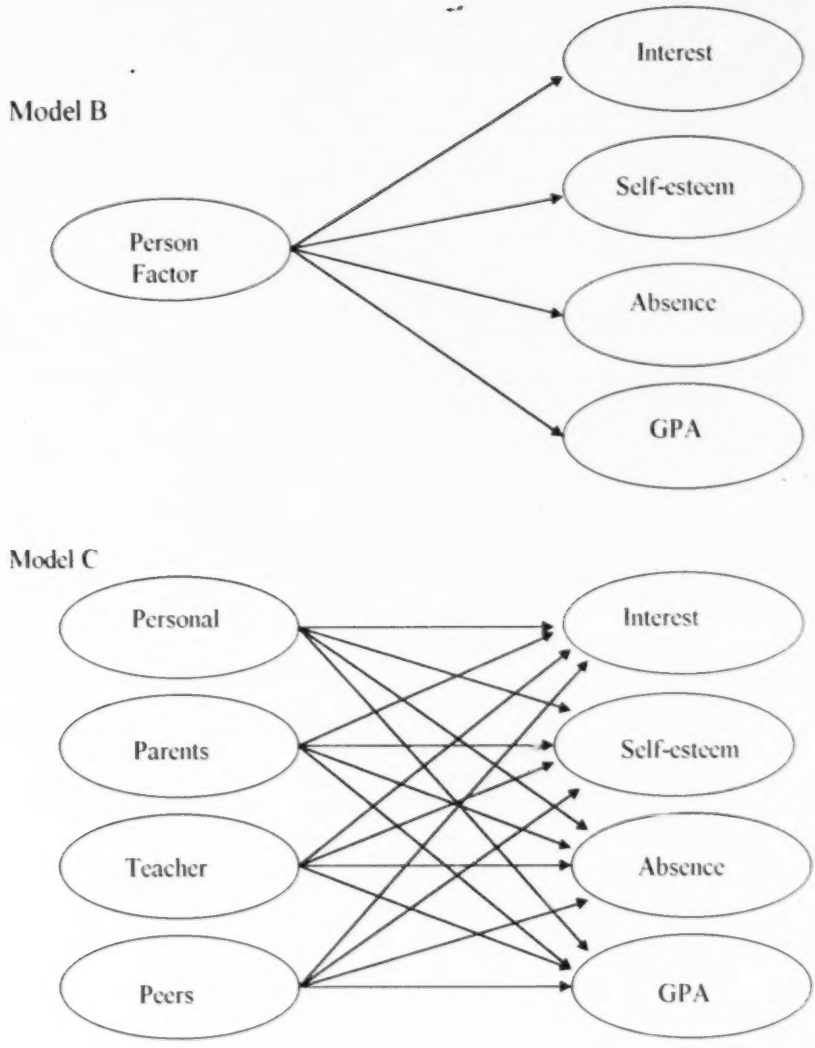

Figure 1. Causal models. Note: Model B tested the effect of each Person factor on four outcomes. Model C tested the relative effects of four predictors on four outcomes.

Model C. The solution of Model C is shown in Table 2. Although the previous models have shown consistently significant effects of individual expectancy and support from significant others, to examine the relative effects of the predicting factors on the outcomes, Model C included all available variables in the structural model. The results show that of all the significant others, the effects of Teacher on the outcome measures were the strongest (also see Table 1). Teacher had significantly positive effects on Interest, Self-esteem, and GPA (βs = .90, .80, and .50, respectively) that were greater than the effects of other factors. Furthermore, Teacher support also had significantly negative effects on Absence from school

(β = -.34). It is also interesting to note that even though Model B has clearly shown significantly positive effects of each Person factor on the Interest, Self-esteem, and GPA outcomes, when all the predicting factors were considered together in the same model, the effects of some of the factors were suppressed by the stronger predictors to such an extent that the paths became negative (and some even statistically significant).

To summarize, the overall pattern of results suggests that support from the students' significant others did have significant impacts on their interest in schoolwork, their self-esteem in a school context, and their academic performance (Model B). Of all the significant others considered in the present study, support from the teacher seems to have the strongest impact on these outcomes. In Model C where there was control for the effects of personal expectancy which was assumed to be the most powerful predictor of the outcomes, the results showing even stronger effects of Teacher should warrant attention.

Discussion

Some researchers have suggested that the teacher is probably the least effective agent of change in student self-concept (e.g., Hattie, 1992) or academic and social competence (e.g., Scarr & Thompson, 1994). These suggestions have cast doubt on the basic classroom structure of the current educational setting where the teacher is assumed to be the major facilitator of learning. They may also lead to serious challenge of the assumptions on which teacher education programs are based. In contrast to these suggestions, however, the findings of the present study show that the teacher, like all the other significant others considered here, had substantial impacts on adolescents' academic achievement, academic self-esteem, and interest in academic work. In a school setting, being probably the most significant of significant others, the teacher had noteworthy influences on all four educational outcomes. More importantly, support from the teacher had even stronger influences than other sources such as parents and peers. Had the teacher's impact been weaker than that of parents and

peers, the effects of Teacher on the outcomes would have been suppressed when all the influencing sources were considered together. On the contrary, the teacher's impacts were so strong that they were even greater than the impact of personal expectancy which was presumably the most powerful predictor of these educational outcomes, and that the effects of some other sources (e.g., Parents) became even negative when the impacts of all significant others were considered together. This apparently strong mutual suppression effect among the Person factors resulting in a particularly large positive Teacher effect and a surprisingly large negative Parent effect surely warrants further investigation. Nevertheless, it is important to note that the Parent effects were negative only after controlling for the effects of other predicting factors; and Models B have clearly shown that the effects of Parents were positive when considered separately.

In general, these results support previous studies demonstrating the importance of support from significant others, including parents, teachers and peers, in the development of adolescents (e.g., Brown & Kafer, 1994; Dunn, Putallaz, Sheppard, & Lindstrom, 1987; Mangione & Speth, 1998; Wolfendale, 1984; Zern, 1985). The results suggesting that the psychological support from significant others have substantial impacts on adolescents' academic self-esteem, interest in academic work, academic performance, and perhaps also retention in school imply the importance of a holistic approach in maintaining and enhancing adolescents' expectancy of success in achieving educational goals. Teacher education programs should therefore equip teachers in service and in training with the capability to involve the wider school community and to gain support from various sources that may have significance to the individual students. Because the positive impacts found in the present study were based on the students' perceived psychological support from significant others, the findings also suggest that it is not only important to provide support to school students, but also essential that the support is explicitly known to the individual. It seems to be particularly

important for the teacher to explicitly exhibit support for students in their academic pursuit because of their relatively greater influence on the adolescents, as demonstrated in the present analyses. After all, among all others in a school setting, the feedback of teachers is probably the most salient reinforcer regarding student proficiency in academic work.

To summarize, adolescents' personal expectancy of educational achievement and their perceived support from parents, teacher and peers all had substantial impacts on students' academic self-esteem, interest in schoolwork, and academic performance. Among all the significant others considered in the study, support from teachers had the strongest impacts. These results show that teachers are probably the most influential agent in promoting academic self-esteem and interest, and in enhancing academic performance in the school context. Whereas teacher education programs should equip teachers in service and in training with the ability to involve all potentially influential individuals in the school curriculum, the development of skills in providing support and in making this support explicitly known to students is also essential.

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Table 1

Goodness of Fit Summary of Models and Path Coefficients

Model	N	χ^2 (df)	TLI	RNI	Null χ^2 (df)				
A. Measurement model, CU	226	731.41(398)	.904	.918	4533.19(465)				
B. Structural models: Grades 7-8						**Paths to**	Interest	Esteem	Absence	GPA
B1. Personal to 4 outcomes	226	156.89(95)	.938	.951	1388.25(120)		.32*	.46*	-.19*	.42*
B2. Parents to 4 outcomes	226	248.73(175)	.967	.973	2917.59(210)		.25*	.45*	-.08	.28*
B3. Teacher to 4 outcomes	226	154.18(109)	.950	.960	1260.06(136)		.59*	.68*	-.21*	.43*
B4. Peers to 4 outcomes	226	144.04(95)	.943	.955	1202.48(120)		.24*	.41*	-.12	.22*
C. Full Structural model: Grades 7-8	226	731.41(398)	.904	.918	4533.19(465)					
Paths from Personal							.13	.17	-.14	.36*
Parents							-.77*	-.51*	.39	-.40
Teacher							.90*	.80*	-.34*	.50*
Peers							.43*	.42*	-.20	.13

Note. TLI = Tucker-Lewis index. RNI = Relative noncentrality index. Measurement models were tested with and without correlated uniquenesses (CU). * $p < .05$

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Table 2.

Solution of Model C

Factor Loadings (FL) and Uniquenesses (Uniq)

Variable	Personal		Parents		Teacher		Peers		Interest		Esteem		Absence		GPA	
	FL	Uniq	FL	Uniq	FL	Uniq	FL	Uniq	FL	Uniq	FL	Uniq	FL	Uniq	FL	Uniq
Item 1	.65*	.58*	.49*	.76*	.74*	.45*	.81*	.35*	.53*	.72*	.64*	.59*	1	0	1	0
Item 2	.83*	.31*	.53*	.72*	.38*	.85*	.75*	.44*	.80*	.36*	.69*	.53*	--	--	--	--
Item 3	.95*	.09*	.78*	.40*	.68*	.54*	.59*	.65*	.69*	.53*	.72*	.49*	--	--	--	--
Item 4	--	--	.53*	.72*	.61*	.63*	--	--	.41*	.83*	.82*	.33*	--	--	--	--
Item 5	--	--	.58*	.66*	--	--	--	--	--	--	.44	.81*	--	--	--	--
Item 6	--	--	.53*	.71*	--	--	--	--	--	--	.64	.59*	--	--	--	--
Item 7	--	--	.66*	.57*	--	--	--	--	--	--	.68*	.54*	--	--	--	--
Item 8	--	--	.60*	.65*	--	--	--	--	--	--	--	--	--	--	--	--

Path Coefficients (From column to row variables)

Interest	.13	-.77*	.90*	.43*				
Esteem	.17	-.51*	.80*	.42*				
Absence	-.14	.39	-.34*	-.20				
GPA	.36*	-.40	.50*	.13				

Factor Correlations

Personal	--							
Parents	.60*	--						
Teacher	.44*	.66*	--					
Peers	.61*	.72*	.34*	--				
Interest	.33*	.21*	.59*	.26*	--			
Esteem	.47*	.42*	.68*	.42*	.51*	--		
Absence	-.18*	-.06	-.21*	-.12	-.03	-.28*	--	
GPA	.42*	.24*	.43*	.23*	.23*	.43*	.37*	--
Residuals	1	1	1	1	.48*	.41*	.91*	.70*

Note: Items for each factor are listed in Appendix. FL = Factor loadings. Uniq = uniquenesses * $p < .05$.

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Appendix

Variables in the Study and Alpha Reliability Estimates

	Alpha Reliability
Personal expectancy	$\alpha = .84$
1 I intend to complete high school.	
2 Personally I feel that I should complete high school.	
3 I'm kind of person who would complete high school.	
Parent support	$\alpha = .67$
1 Father says I'm bright enough to go on college.	
2 Father encourages me to leave school as soon as possible. (r)	
3 Father thinks I should leave school as soon as possible. (r)	
4 If I want to go to college, my father would encourage me.	
5 Mother says I'm bright enough to go on college.	
6 Mother encourages me to leave school as soon as possible. (r)	
7 Mother thinks I should leave school as soon as possible. (r)	
8 If I want to go to college, my mother would encourage me.	
Teacher support	$\alpha = .68$
1 Teacher says I'm bright enough to go on college.	
2 Some teachers encourage me to leave school as soon as possible. (r)	
3 I am encouraged by teachers to do well at school	
4 If I want to go to college, my teacher would encourage me.	
Peer support	$\alpha = .77$
1 My friends tell me to leave school and get a job. (r)	
2 My friends say that I should leave school as soon as possible. (r)	
3 My friends tell me to leave school and go on welfare. (r)	
Interest in schoolwork	$\alpha = .68$
1 I hate learning or studying of anything. (r)	
2 I like working at school.	
3 The subjects at school interest me.	
4 I don't mind working long hours for interesting subjects.	
Academic Self-esteem	$\alpha = .84$
1 I am very confident at school.	
2 I can do things as well as most other people at school.	
3 On the whole I'm pleased with myself at school.	
4 I think I can do quite well at school.	
5 I succeed at whatever I do at school.	
6 I think I'm as good as everybody else at school.	
7 Most of the time I feel that I can do my schoolwork.	
Absence Number of days absent from school in the whole year.	
GPA Standardized scores of performance at school.	

Note: The items marked with (r) were reverse scored.